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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,155	11/25/2003	Masayuki Koshino	245821US90	9641

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EXAMINER	
VIANA DI PRISCO, GERMAN	

ART UNIT	PAPER NUMBER
2617	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/720,155	KOSHINO ET AL.	
	Examiner	Art Unit	
	GERMAN VIANA DI PRISCO	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 October 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *11-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 20 and 21 are rejected under 35 U.S.C. 102 (e) as being anticipated by Widegren et al. (United States Patent Application Publication No.: US 2003/0172160 A9, hereinafter Widegren).

Consider claim 20, Widegren clearly shows and discloses a radio access method for transferring user data in a radio access network comprising a base station configured to communicate the user data with a mobile station via a radio channel, and a control apparatus configured to control the base station, the method comprising:

(1) transmitting, at the mobile station, a transfer path setting request for requesting to set a transfer path of the user data, to a core network via the radio access network (step 2, Activate PDP Context Request in figure 18 and paragraph 96);

(2) receiving, at the control apparatus, a transfer path assignment request for requesting to assign the transfer path of the user data, from the core network (RAB Assignment Request , step 3 in figure 18 and paragraph 97);

(3) setting, at the control apparatus, the transfer path of the user data, in accordance with the transfer path assignment request (the RNC determines or sets the radio-related parameters) (figures 8 and 18 and paragraphs 37 and 98)

(4) setting, at the control apparatus, a priority with which the user data is transferred over the transfer path of the user data set in the step (3) (the RNC determines or sets the radio-related parameters corresponding to the negotiated QoS attributes which implicitly carry the priority of the data i.e. how delay sensitive the traffic is) (figures 8 and 18 and paragraphs 37 and 98); and

(5) transmitting, at the control apparatus, to the base station, a radio channel setting request for requesting to set the radio channel, the radio channel setting request including the priority (the RNC has to communicate the base station the parameters that the base station will use in setting up a radio bearer with the mobile station as shown by steps 5 and 6 in figure18 and paragraphs 99 and 100).

Consider claim 21, Widegren clearly shows and discloses a radio access method for transferring user data, in a radio access network wherein a mobile station communicates user data via a radio channel, the method comprising:

(1) transmitting a transfer path setting request for requesting to set a transfer path of the user data, to a core network via the radio access network(step 2, Activate PDP Context Request in figure 18 and paragraph 96);

(2) receiving a transfer path assignment request for requesting to assign the transfer path of the user data, from the core network (RAB Assignment Request , step

3 in figure 18 and paragraph 97);

(3) setting the transfer path of the user data, in accordance with the transfer path assignment request (the RNC determines or sets the radio-related parameters) (figures 8 and 18 and paragraphs 37 and 98]); and

(4) setting a priority with which the user data is transferred over the transfer path of the user data set in the step (3), wherein:

the transfer path setting request includes a traffic class showing a type of the user data (defined by the QoS requested, step 2 in figure 18), the transfer path assignment request includes the traffic class (conversational, streaming, interactive, background), and in the step (4), the priority is set in accordance with the traffic class (figures 8 and 18 and paragraphs 37 , 38 and 96).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 11, 15 and 22 rejected under 35 U.S.C. 103(a) as being unpatentable over Widegren, and further in view of Balachandran et I. (United States Patent Application Publication No.: US 2003/0235196 A1, hereinafter Balachandran).

Consider claims 11 and 22, Widegren teaches a radio access network system (UTRAN, comprised of Node B and RNC) for transferring user data in a radio access network, comprising a base station (Node B) configured to communicate the user data with a mobile station(UE or MS) via a radio channel, and a control apparatus (RNC or radio network controller) configured to control the base station, wherein: the mobile station is configured to transmit a transfer path setting request (Activate PDP Context Request, step 2 in figure 18 and paragraph 96), for requesting to set a transfer path of

the user data, to a core network via the radio access network; and the control apparatus comprises:

a receiving unit (inherently taught by the RNC receiving a RAB Assignment Request) configured to receive a transfer path assignment request (RAB Assignment Request, step 3 in figure 18 and paragraph 97]) for requesting to assign the transfer path of the user data, from the core network (3G-SGSN), a transfer path setting unit configured to set the transfer path of the user data, in accordance with the transfer path assignment request

and a transmitting unit configured to transmit, to the base station, a radio channel setting request for requesting to set the radio channel, the radio channel setting request including the priority (the RNC has to communicate the base station the parameters that the base station will use in setting up a radio bearer with the mobile station as shown by steps 5 and 6 in figure18 and paragraphs 99 and 100).

While Widegren discloses assigning a specific QoS, depending on the traffic class (hence a priority), to each packet, Widegren does not expressly disclose a priority setting unit configured to set a priority for the transfer path such that packet data transmitted from the base station along the transfer path to the control apparatus is processed according to the priority set for the transfer path by the transfer path setting unit.

In the same field of endeavor Balachandran teaches that the Gateway GPRS Support Node (232 in Fig. 4) causes the creation separate Radio Access Bearers (i.e. transfer paths) for each priority class (paragraph 37).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Balachandran with the teachings of Widegren in order to control the transmission of streaming data.

Consider claim 15, and as applied to claim 11 above, Widegren further teaches a base station comprising a packet processing unit (inherently taught by the mapping function in the RNC) configured to regenerate a data packet, based on the user data received from the mobile station; and the packet processing unit is configured to add the priority to a predetermined field in the data packet (paragraph 33).

7. Claims 12 and 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Widegren, in view of Balachandran et al. (United States Patent Application Publication No.: US 2003/0235196 A1, hereinafter Balachandran), and further in view of Cayla et al. (United States Patent Application Publication No.: US 2004/0004949 A1, hereinafter Cayla).

Consider claim 12, and as applied to claim 11 above, Widegren further teaches that the transfer path setting request includes a traffic class showing a type of the user

data (defined by the QoS requested, step 2 in figure 18); the transfer path assignment request includes the traffic class (conversational, streaming, interactive, background); and the priority setting unit is configured to set the priority in accordance with the traffic class (see also figures 8 and 18 and paragraphs 37, 38 and 96.

However Widegren as modified by Balachandran does not explicitly disclose setting a priority in accordance with the traffic class.

In the same field of endeavor Cayla teaches that the type of traffic handled, especially the QoS parameters may include priorities, and further that speech/conversational traffic defines a high priority due to the stringent delay requirements (see paragraphs 30-39).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to set a priority according to the type of traffic as taught by Cayla in the system of Widegren as modified by Balachandran in order to make efficient use of resources.

Consider claim 13 and as applied to claim 12 above, Cayla further discloses that priority setting unit is configured to set the priority, so that when the traffic class requires real- time communication a priority is set higher than a priority set when the traffic class does not require real-time communication (paragraphs 34-39).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made, to set a priority according to the type of traffic as taught by

Cayla in the system of Widegren as modified by Balachandran in order to make efficient use of resources.

8. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Widegren in view of Balachandran and of Cayla, and further in view of Artamo et al. (United States Patent Application Publication No.: US 2004/0053606 A1, hereinafter Artamo).

Consider claim 14 and as applied to claim 12 above, Widegren as modified by Balachandran and further modified by Cayla does not explicitly disclose a priority determination table.

In the same field of endeavor Artamo discloses using a priority determination table associating the traffic class with the priority; and the priority setting unit is configured to set the priority by referring the priority determination table (paragraph 12]).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a priority determination table as disclosed by Artamo in the system of Widegren as modified by Balachandran and further modified by Cayla in order to efficiently allocate resources in a wireless network.

9. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Widegren in view of Balachandran, and further in view of Haumont et al. (International Publication Number WO 00/10357, hereinafter Haumont).

Consider claim 16, and as applied to claim 15 above, Widegren as modified by Balachandran does not explicitly disclose the claimed limitation.

In the same field of endeavor Haumont discloses a field for defining a priority of the data packet by a common format used in a plurality of networks (Type of Service Octet in the IP header, page 22, lines 23-25).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a predetermined field as disclosed by Haumont in the system of Widegren as modified by Balachandran in order to control Quality of Service in a mobile communications system having a packet data transmission capability.

Consider claim 17, and as applied to cliam15 above, Widegren as modified by Balachandran does not explicitly disclose the claimed invention.

In the same field of endeavor, Haumont discloses that the predetermined field is a field for defining any of delay characteristics of the data packet (page 22, lines 28-30).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a predetermined field as disclosed by Haumont in the system of Widegren as modified by Balachandran in order to control Quality of Service in a mobile communications system having a packet data transmission capability.

10. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Widegren in view of Balachandran, and further in view of Yoshida et al. (United States Patent Application Publication No.: US 2002/0068588 A1, hereinafter Yoshida).

Consider claim 18, and as applied to claim 15 above, Widegren as modified by Balachandran does not specifically disclose the claimed limitation.

In the same field of endeavor Yoshida discloses that the base station comprises a transfer table for associating the priority included in the radio channel setting request with the radio channel; and that the base station is configured to specify the priority by referring the transfer table, and to transmit the data packet which is regenerated by the packet processing unit, to the control apparatus in accordance with the priority (session management table 506 in figure 7 and paragraphs 71 , 72 and 80]).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a session management table as disclosed by Yoshida in the system of Widegren as modified by Balachandran in order to appropriately transfer packets destined to a mobile station.

Consider claim 19, and as applied to claim 15 above, Widegren as modified by Balachandran does not specifically disclose the claimed limitation.

In the same field of endeavor Yoshida discloses that the control apparatus comprises a transfer table for associating the transfer path of the user data which is set

by the transfer path setting unit with the priority which is set by the priority setting unit; and the control apparatus is configured to specify the priority by referring the transfer table, and to transmit the data packet which is received from the base station, to the core network in accordance with the priority (session management table 1106 in figure 12A and paragraphs 87]-[0091]).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a session management table as disclosed by Yoshida in the system of Widegren as modified by Balachandran in order to appropriately transfer packets destined to a mobile station.

Consider claim 23, and as applied to claim 18 above, Balachandran further discloses that the base station is configured to store the data packet into one of a plurality of RAN-side priority transmission queues according to a priority set for the data packet, and the base station includes a RAN-side processing unit configured to transmit data packets stored in a high-priority queue at a rate higher than data packets stored in a low priority queue (Fig. 2 and paragraph27).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Balachandran with the teachings of Widegren and Yoshida in order to control the transmission of streaming data.

11. Claim 24 is are rejected under 35 U.S.C. 103(a) as being unpatentable over Widegren in view of Balachandran, and of Yoshida and further in view of Ruutu et al. (United States Patent Application Publication No.: US 2004/0001491 A1, hereinafter Ruutu).

Consider claim 24, and as applied to claim 19 above, the combination of Widegren, Balachandran and Yoshida does not expressly discloses the claimed limitation.

In the same field of endeavor Ruutu teaches that the control apparatus (IP router) is configured to store the data packet into one of a plurality of core-side priority transmission queues according to a priority set for the data packet, and the control apparatus includes a core-side processing unit configured to transmit data packets stored in a high-priority queue at a rate higher than data packets stored in a low priority queue (i.e. using Priority Queuing, paragraphs 60-61).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the teachings of Ruutu with the teachings of Widegren, Balachandran and Yoshida in order to configure the scheduling of IP routers in a flexible way.

Response to Arguments

12. Applicant's arguments been considered but are moot in view of the new ground(s) of rejection.

Conclusion

13. Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to**:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GERMAN VIANA DI PRISCO whose telephone number is (571)270-1781. The examiner can normally be reached on Monday through Friday 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rafael Perez-Gutierrez can be reached on (571) 272-7915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/German Viana Di Prisco/
Examiner, Art Unit 2617
December 23, 2009

/KAMRAN AFSHAR/
Primary Examiner, Art Unit 2617